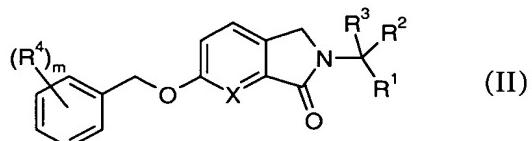
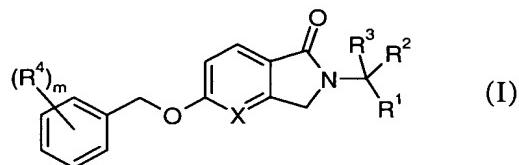


Claims

1. A compound of formula I or II



wherein

X is $-N=$ or $-CH=;$

R¹ is $-(CH_2)_n-CO-NR^5R^6$, $-(CH_2)_n-NR^5R^6$, $-(CH_2)_n-COOR^7$, $-(CH_2)_n-CN$, $-(CH_2)_n\text{-isoindole-1,3-dionyl}$, or $-(CH_2)_p-OR^8$;

R² is hydrogen, C₁-C₆-alkyl, or OH;

R³ is hydrogen or C₁-C₆-alkyl;

R⁴ is (C₁-C₆)-alkyl, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or halogen-(C₁-C₆)-alkoxy;

R⁵ and R⁶ are each independently hydrogen or C₁-C₆-alkyl;

R⁷ is C₁-C₆-alkyl;

R⁸ is hydrogen or C₁-C₆-alkyl;

m is 1, 2 or 3;

n is 0, 1 or 2; and

p is 1 or 2;

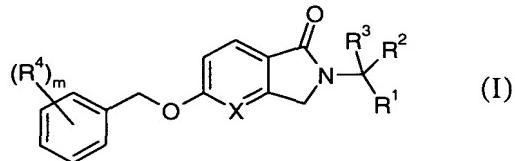
or a pharmaceutically acceptable salt thereof.

2. A compound of claim 1 wherein m is 1 or 2.

3. A compound of claim 2 wherein m is 1.

4. A compound of claim 1 wherein R⁴ is halogen or halogen-(C₁-C₆)-alkyl.

5. A compound of claim 4 wherein R⁴ is fluorine or trifluoromethyl.
6. A compound of claim 1 wherein X is -CH=.
7. A compound of formula I



wherein

- X is -N= or -CH=;
- R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, -(CH₂)_n-isoindole-1,3-dionyl, or -(CH₂)_p-OR⁸;
- R² is hydrogen, C₁-C₆-alkyl, or OH;
- R³ is hydrogen or C₁-C₆-alkyl;
- R⁴ is (C₁-C₆)-alkyl, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or halogen-(C₁-C₆)-alkoxy;
- R⁵ and R⁶ are each independently hydrogen or C₁-C₆-alkyl;
- R⁷ is C₁-C₆-alkyl;
- R⁸ is hydrogen or C₁-C₆-alkyl;
- m is 1, 2 or 3;
- n is 0, 1 or 2; and
- p is 1 or 2;

or a pharmaceutically acceptable salt thereof.

8. A compound of claim 7 wherein R³ is hydrogen.
9. A compound of claim 7 wherein m is 1 or 2.
10. A compound of claim 9 wherein m is 1.

11. A compound of claim 7 wherein R² is hydrogen or C₁-C₆-alkyl.
12. A compound of claim 11 wherein R² is hydrogen.
13. A compound of claim 11 wherein R² is methyl.
14. A compound of claim 7 wherein R¹ is CONH₂ or CH₂OCH₃.
15. A compound of claim 7 wherein R⁸ is C₁-C₆-alkyl.
16. A compound of claim 15 wherein R¹ is -(CH₂)_p-OR⁸.
17. A compound of claim 15 wherein R¹ is -(CH₂)_n-CO-NR⁵R⁶ or -(CH₂)_p-OR⁸; R⁵ and R⁶ are hydrogen; n is 0; and p = 1.
18. A compound of claim 7 wherein R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, -(CH₂)_n-isoindole-1,3-dionyl, or -(CH₂)_p-OR⁸; R⁵ and R⁶ are hydrogen; n is 0 or 1; and p is 1.
19. A compound of claim 7 wherein X is -N=.
20. A compound of claim 7 wherein X is -CH₂-.
21. A compound of formula I
- (Ia)
- wherein
- R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, -(CH₂)_n-isoindole-1,3-dionyl, or -(CH₂)_p-OR⁸;
- R² is hydrogen, C₁-C₆-alkyl, or OH;

R^3 is hydrogen or C_1 - C_6 -alkyl;
 R^4 is $(C_1$ - $C_6)$ -alkyl, halogen, halogen- $(C_1$ - $C_6)$ -alkyl, C_1 - C_6 -alkoxy or halogen- $(C_1$ - $C_6)$ -alkoxy;
 R^5 and R^6 are each independently hydrogen or C_1 - C_6 -alkyl;
 R^7 is C_1 - C_6 -alkyl;
 R^8 is hydrogen or C_1 - C_6 -alkyl;
 m is 1, 2 or 3;
 n is 0, 1 or 2; and
 p is 1 or 2;
or a pharmaceutically acceptable salt thereof.

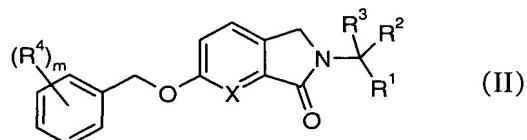
22. A compound of claim 21 wherein R^1 is $-(CH_2)_n-CO-NR^5R^6$.

23. A compound of claim 21 wherein R^1 is $-(CH_2)_n-CO-NR^5R^6$, $-(CH_2)_n-COOR^7$, $-(CH_2)_n-CN$, $-(CH_2)_n$ -isoindole-1,3-dionyl, or $-(CH_2)_p-OR^8$; R^3 is hydrogen; R^4 is halogen or halogen- $(C_1$ - $C_6)$ -alkyl; R^5 and R^6 are hydrogen; m is 1 or 2; n is 0 or 1; and p is 1.

24. A compound of claim 21 wherein R^1 is $-(CH_2)_n-CO-NR^5R^6$ or $-(CH_2)_p-OR^8$; R^2 is hydrogen or C_1 - C_6 -alkyl; R^3 is hydrogen; R^4 is halogen or halogen- $(C_1$ - $C_6)$ -alkyl; R^5 and R^6 are hydrogen; R^8 is C_1 - C_6 -alkyl; m is 1; n is 0; and p is 1.

25. A compound of claim 21 wherein R^1 is $CO-NH_2$ or CH_2OCH_3 ; R^2 is hydrogen or methyl; R^3 is hydrogen; R^4 is fluorine or trifluoromethyl; and m is 1.

26. A compound of formula II



wherein

X is $-N=$ or $-CH=$;
 R^1 is $-(CH_2)_n-CO-NR^5R^6$, $-(CH_2)_n-NR^5R^6$, $-(CH_2)_n-COOR^7$, $-(CH_2)_n-CN$, $-(CH_2)_n$ -isoindole-1,3-dionyl, or $-(CH_2)_p-OR^8$;

R^2 is hydrogen, C_1 - C_6 -alkyl, or OH;
 R^3 is hydrogen or C_1 - C_6 -alkyl;
 R^4 is $(C_1$ - $C_6)$ -alkyl, halogen, halogen- $(C_1$ - $C_6)$ -alkyl, C_1 - C_6 -alkoxy or halogen- $(C_1$ - $C_6)$ -alkoxy;
 R^5 and R^6 are each independently hydrogen or C_1 - C_6 -alkyl;
 R^7 is C_1 - C_6 -alkyl;
 R^8 is hydrogen or C_1 - C_6 -alkyl;
 m is 1, 2 or 3;
 n is 0, 1 or 2; and
 p is 1 or 2;
or a pharmaceutically acceptable salt thereof.

27. A compound of claim 26 wherein m is 1.
28. A compound of claim 26 wherein R^3 is hydrogen.
29. A compound of claim 26 wherein R^1 is $-(CH_2)_n-CO-NR^5R^6$.
30. A compound of claim 26 wherein R^1 is $-(CH_2)_n-COOR^7$.
31. A compound of claim 26 wherein R^1 is $-(CH_2)_n-NR^5R^6$.
32. A compound of calim 26 wherein R^2 is hydrogen or C_1 - C_6 -alkyl.
33. A compound of claim 32 wherein R^2 is hydrogen.
34. A compound of claim 32 wherein R^2 is methyl.
35. A compound of claim 26 wherein R^4 is halogen or halogen- $(C_1$ - $C_6)$ -alkyl.
36. A compound of claim 35 wherein R^4 is fluorine or trifluoromethyl.

37. A compound of claim 26 wherein R⁸ is C₁-C₆-alkyl.
38. A compound of claim 37 wherein R¹ is -(CH₂)_p-OR⁸.
39. A compound of claim 37 wherein R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, or -(CH₂)_p-OR⁸; R⁵ and R⁶ are hydrogen; n is 0; and p is 1.
40. A compound of claim 37 wherein R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, or -(CH₂)_p-OR⁸ and m is 1.
41. A compound of claim 26 wherein R¹ is CONH₂, CH₂NH₂, COOCH₃, or CH₂OCH₃.
42. A compound of claim 26 wherein X = -N=.
43. A compound of formula IIa
- (IIa)
- R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, -(CH₂)_n-isoindole-1,3-dionyl, or -(CH₂)_p-OR⁸;
- R² is hydrogen, C₁-C₆-alkyl, or OH;
- R³ is hydrogen or C₁-C₆-alkyl;
- R⁴ is (C₁-C₆)-alkyl, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or halogen-(C₁-C₆)-alkoxy;
- R⁵ and R⁶ are each independently hydrogen or C₁-C₆-alkyl;
- R⁷ is C₁-C₆-alkyl;
- R⁸ is hydrogen or C₁-C₆-alkyl;
- m is 1, 2 or 3;
- n is 0, 1 or 2; and
- p is 1 or 2;
- or a pharmaceutically acceptable salt thereof.

44. A compound of claim 43 wherein R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, or -(CH₂)_p-OR⁸; R² is hydrogen or C₁-C₆-alkyl; R³ is hydrogen; R⁴ is halogen or halogen-(C₁-C₆)-alkyl; R⁵ and R⁶ are hydrogen; R⁸ is C₁-C₆-alkyl; m is 1; n is 0; and p is 1.

45. A compound of claim 43 wherein R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, or -(CH₂)_p-OR⁸; R² is hydrogen or C₁-C₆-alkyl; R³ is hydrogen; R⁴ is halogen or halogen-(C₁-C₆)-alkyl; R⁵ and R⁶ are hydrogen; R⁸ is C₁-C₆-alkyl; m is 1; n is 0; and p is 1.

46. A compound of claim 43 wherein R¹ is CONH₂, CH₂NH₂, COOCH₃, CH₂OCH₃; R² is hydrogen or methyl; R³ is hydrogen; R⁴ is fluorine or trifluoromethyl; and m is 1.

47. A compound selected from
2-[5-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-acetamide,
2-[5-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-propionamide,
(S)-2-[6-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-propionamide,
(R)-2-[6-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-propionamide,
2-[5-(4-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-acetamide, or
2-[1-oxo-5-(4-trifluoromethyl-benzyloxy)-1,3-dihydro-isoindol-2-yl]-acetamide.

48. A compound which is 5-(3-fluoro-benzyloxy)-2-(2-methoxy-ethyl)-2,3-dihydro-isoindol-1-one.

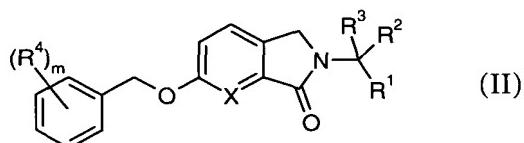
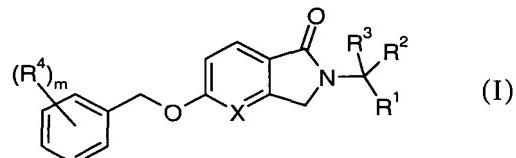
49. A compound selected from
2-[6-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-acetamide,
(R)-2-[6-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-propionamide,
(S)-2-[1-oxo-6-(4-trifluoromethyl-benzyloxy)-1,3-dihydro-isoindol-2-yl]-propionamide,
and
(R)-2-[1-oxo-6-(4-trifluoromethyl-benzyloxy)-1,3-dihydro-isoindol-2-yl]-propionamide.

50. A compound selected from
[6-(3-fluoro-benzyloxy)-1-oxo-1,3-dihydro-isoindol-2-yl]-acetic acid methyl ester and
[1-oxo-6-(4-trifluoromethyl-benzyloxy)-1,3-dihydro-isoindol-2-yl]-acetic acid methyl ester.

51. A compound selected from
2-(2-methoxy-ethyl)-6-(3-fluoro-benzyloxy)-2,3-dihydro-isoindol-1-one and
2-(2-methoxy-ethyl)-6-(4-trifluoromethyl-benzyloxy)-2,3-dihydro-isoindol-1-one.

52. A compound selected from
2-(2-amino-ethyl)-6-(4-trifluoromethyl-benzyloxy)-2,3-dihydro-isoindol-1-one 1:1 hydrochloride and
2-(2-amino-ethyl)-6-(4-trifluoromethyl-benzyloxy)-2,3-dihydro-isoindol-1-one 1:1 hydrochloride.

53. A composition comprising a compound of formula I or II



wherein

X is $-N=$ or $-CH=;$

R¹ is $-(CH_2)_n-CO-NR^5R^6$, $-(CH_2)_n-NR^5R^6$, $-(CH_2)_n-COOR^7$, $-(CH_2)_n-CN$, $-(CH_2)_n\text{-isoindole-1,3-dionyl}$, or $-(CH_2)_p-OR^8$;

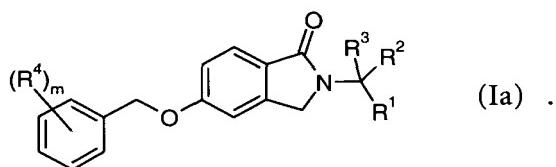
R² is hydrogen, C₁-C₆-alkyl, or OH;

R³ is hydrogen or C₁-C₆-alkyl;

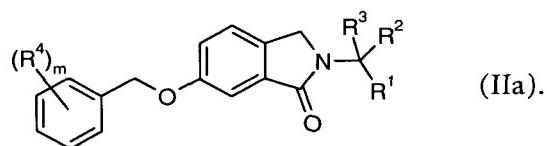
R⁴ is (C₁-C₆)-alkyl, halogen, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or halogen-(C₁-C₆)-alkoxy;

R^5 and R^6 are each independently hydrogen or C₁-C₆-alkyl;
 R^7 is C₁-C₆-alkyl;
 R^8 is hydrogen or C₁-C₆-alkyl;
 m is 1, 2 or 3;
 n is 0, 1 or 2; and
 p is 1 or 2;
or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.

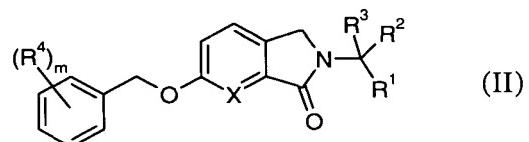
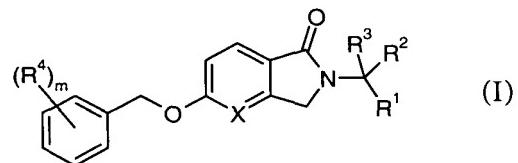
54. A composition of claim 53 wherein the compound is a compound of formula Ia



55. A composition of claim 53 wherein the compound is a compound of formula IIa



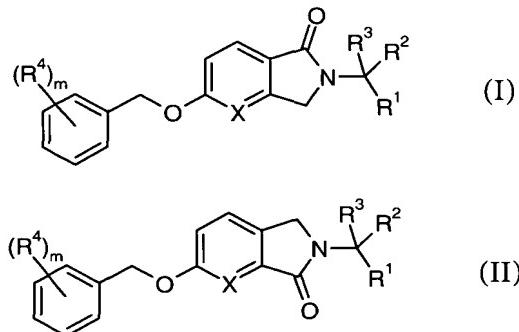
56. A method of treating Alzheimer's disease by administering to an individual an effective amount of a compound of formula I or II



wherein

X is $-N=$ or $-CH=$;
 R¹ is $-(CH_2)_n-CO-NR^5R^6$, $-(CH_2)_n-NR^5R^6$, $-(CH_2)_n-COOR^7$, $-(CH_2)_n-CN$,
 $-(CH_2)_n\text{-isoindole-1,3-dionyl}$, or $-(CH_2)_p-OR^8$;
 R² is hydrogen, C₁-C₆-alkyl, or OH;
 R³ is hydrogen or C₁-C₆-alkyl;
 R⁴ is (C₁-C₆)-alkyl, halogen, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or
 halogen-(C₁-C₆)-alkoxy;
 R⁵ and R⁶ are each independently hydrogen or C₁-C₆-alkyl;
 R⁷ is C₁-C₆-alkyl;
 R⁸ is hydrogen or C₁-C₆-alkyl;
 m is 1, 2 or 3;
 n is 0, 1 or 2; and
 p is 1 or 2;
 or a pharmaceutically acceptable salt thereof.

57. A method of treating Parkinson's disease by administering to an individual an effective amount of a compound of formula I or II



wherein

X is $-N=$ or $-CH=$;
 R¹ is $-(CH_2)_n-CO-NR^5R^6$, $-(CH_2)_n-NR^5R^6$, $-(CH_2)_n-COOR^7$, $-(CH_2)_n-CN$,
 $-(CH_2)_n\text{-isoindole-1,3-dionyl}$, or $-(CH_2)_p-OR^8$;
 R² is hydrogen, C₁-C₆-alkyl, or OH;
 R³ is hydrogen or C₁-C₆-alkyl;

R⁴ is (C₁-C₆)-alkyl, halogen, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or halogen-(C₁-C₆)-alkoxy;

R⁵ and R⁶ are each independently hydrogen or C₁-C₆-alkyl;

R⁷ is C₁-C₆-alkyl;

R⁸ is hydrogen or C₁-C₆-alkyl;

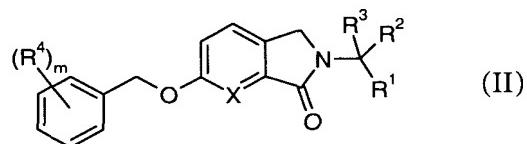
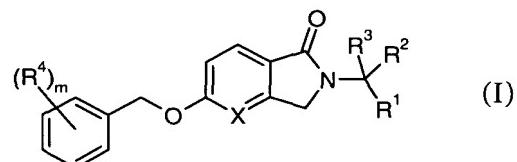
m is 1, 2 or 3;

n is 0, 1 or 2; and

p is 1 or 2;

or a pharmaceutically acceptable salt thereof.

58. A method of treating senile dementia by administering to an individual an effective amount of a compound of formula I or II



wherein

X is -N= or -CH=;

R¹ is -(CH₂)_n-CO-NR⁵R⁶, -(CH₂)_n-NR⁵R⁶, -(CH₂)_n-COOR⁷, -(CH₂)_n-CN, -(CH₂)_n-isoindole-1,3-dionyl, or -(CH₂)_p-OR⁸;

R² is hydrogen, C₁-C₆-alkyl, or OH;

R³ is hydrogen or C₁-C₆-alkyl;

R⁴ is (C₁-C₆)-alkyl, halogen, halogen-(C₁-C₆)-alkyl, C₁-C₆-alkoxy or halogen-(C₁-C₆)-alkoxy;

R⁵ and R⁶ are each independently hydrogen or C₁-C₆-alkyl;

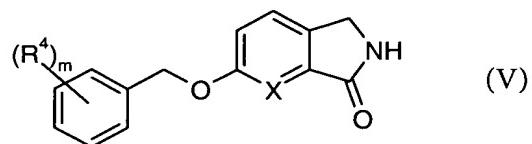
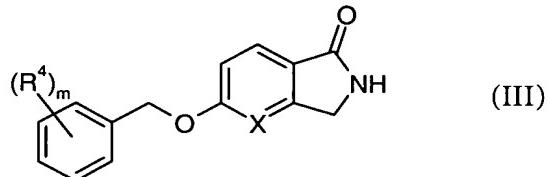
R⁷ is C₁-C₆-alkyl;

R⁸ is hydrogen or C₁-C₆-alkyl;

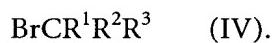
m is 1, 2 or 3;

n is 0, 1 or 2; and
p is 1 or 2;
or a pharmaceutically acceptable salt thereof.

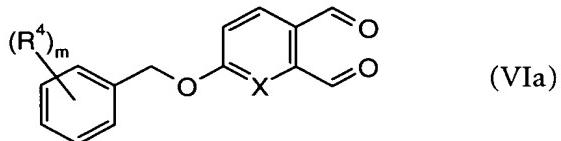
59. A process for the preparation of a compound of claim 1 comprising reacting a compound of formula III or V



with a compound of formula IV



60. A process for the preparation of a compound of claim 1 and pharmaceutically acceptable salts thereof, comprising dissolving a compound of formula VIa



which is then treated with a compound of formula VII

